UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,485	02/17/2004	Ravinder Prakash	CHA920030036US1	1554

23550 7590 12/27/2007	EXAMINER
HOFFMAN WARNICK & D'ALESSANDRO, LLC	KASSA, YOSEF
75 STATE STREET	

ART UNIT	PAPER NUMBER
2624	

NOTIFICATION DATE	DELIVERY MODE
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14TH FLOOR
ALBANY, NY 12207

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOCommunications@hwdpatents.com

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>07 September 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-6</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-6</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

Reopen Persecution

1.   Applicant is advised that the Notice of Allowance mailed in 06/08/2007 is

vacated, because a new references surfaced to the Examiner. If the issue fee has already

been paid, applicant may request a refund or request that the fee be credited to a deposit

account. However, applicant may wait until the application is either found allowable or

held abandoned. If allowed, upon receipt of a new Notice of Allowance, applicant may

request that the previously submitted issue fee be applied. If abandoned, applicant may

request refund or credit to a specified Deposit Account.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S.

Patent 5, 404, 411 to Banton et al.

Regarding claim 1, Banton discloses An edge smoothing filter for correcting

defects in a black white image (the image being filtered is binary, col. 3, lines 42-48),

comprising:

a system (Fig. 1) for processing blocks of pixels in the black white image,

wherein each block comprises one center pixel and eight exterior pixels (Fig. 3a;

alternatively, inferred by Figs. 3c and 3d: note that Figs. 3c and 3d are templates used for

matching, implying that corresponding pixel blocks of the same are processed); and

an algorithm that examines each block of pixels, wherein the algorithm

overwrites the value of the center pixel (Banton's disclosure meets this in either of two

ways: 1) at col. 5, lines 60-62, referring to fig. 3a, the patent states that when a match is

found between the pattern and the 3x3 area in the image, the line edge is thinned by one

bit. The left diagram in fig. 3a shows the pattern being matched, and the night diagram

shows the edge having been thinned. Note that the center pixel is overwritten, from a

back pixel in the left diagram, to a white pixel in the right diagram; 2) at col. 6, lines 7-

11, referring to figs. 3c and 3d, the patent explains that when a match is found between a

pattern and an area in the image, the half bits and off-bits adjacent to the solid edge can

be removed. Note first that the half-bitted edge in fig. 3b is being removed, col. 5, line

67 to col. 6, line 1. In the case of the pattern shown in fig. 3d, for example, a match with

an area of fir. 3b would remove the portion corresponding to the half-bitted edge, i.e.; the

pixel corresponding to the center pixel is changed, or overwritten from black to white.)

if:

all three pixels along a first edge share a first value (Banton shows this with two

different patterns: 1) in the left diagram in fig. 3a the pixels of the left edge share a white

value; 2) in fig. 3d, the pixels of the top edge share a white value); and

all three pixels along an opposing edge share a second value that is opposite of the

first value (Banton shows this with the above-mentioned patterns: 1) in the left diagram

in fig. 3a, the pixels of the right edge share a black value; 2) in fig. 3d, the pixels of the

bottom edge share a black value); and

the two exterior pixels residing between the first and second edge share a common

value (Banton shows this with the above mentioned patters: 1) in the left diagram in fig.

3a, the exterior pixels are those that are adjacent to the center pixel, one in the top row

and one in the bottom row. They share a black value; 2) in fig. 3d, the exterior pixels are

those that are adjacent to the center pixel, one in the left column, and one in the right

column. They share a white value).

As to claim 2, Banton discloses the edge smoothing filter of claim 1, wherein

the center pixel is overwritten with the common value of the two exterior pixels

residing between the first and second edge (this is met by Banton's Fig.3d and

column 6, lines 7-11; since the black pixels above the solid edge in Fig.3b are being

removed, they become white, this matching the two exterior pixels.).

Regarding claim 3, Banton discloses the edge smoothing filter of claim 1,

wherein the black white image comprises character data (column 2, lines 30-31).

Regarding claim 4, Banton discloses a method for correcting defects in a black

white image, comprising:

selecting a block of pixels from the black white image, wherein the block

comprises one center pixel and eight exterior pixels (inferred by Figs.3c and 3d: note

that Figs.3c and 3d are templates used for matching, implying that corresponding pixel

blocks of the same are processed); examining the block of pixels to determine if:

all three pixels along a first edge share a first value (in Fig.3d, the pixels of

the top edge share a white value), and

all three pixels along an opposing edge share a second value that is opposite of

the first value (in Fig.3d, the pixels of the bottom edge share a black value), and

two exterior pixels residing between the first and second edge share a common

value (in Fig.3d, the exterior pixels are those that are adjacent to the center pixel, one

in the left column, and one in the right column. They share a white value); and

if the above conditions are met, overwriting the value of the center pixel

with the common value of the two exterior pixels between the first and second edge

(at column 6, lines 7-11, referring to Figs. 3c and 3d, the patent explains that when a

match is found between a pattern and an area in the image, the half bits and off-bits

adjacent to the solid edge can be removed. Note first that the half-bitted edge in

Fig.3b is being removed, column 5, line 67 to column 6, line 1. In the case of the

pattern shown in Fjg.3d, for example, a match with an area of Fig.3b would remove the

portion corresponding to the half-bitted edge, i.e., the pixel corresponding to the center

pixel is changed, or overwritten from black to white, which is the common value of

the two exterior pixels.).

With regard to claim 5, Banton discloses the method of claim 4, wherein the

steps are repeated for different blocks of pixels in the black white image (this is

implied as it would process the entire image, and at the very least, an edge as shown in

Fig.3a, a 3x3 area at a time).

Regarding claim 6, the discussion provided above for claim 4 is applicable. Banton's invention is computer based (note appendix in columns 7-8), and therefore the program product is inherent.

3.   Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,181,437 to Sawada.

As to claim 1, Sawada discloses an edge smoothing filter for correcting defects in a black white image, comprising:

a system (Fig.22) for processing blocks of pixels in the black white image (the image can be binary, column 10, line 24), wherein each block comprises one center pixel and eight exterior pixels (a 3x2 scanning window is used, as per Fig.23, so the pixels blocks being processed are also 3x3, with a center pixel at a22); and

an algorithm that examines each block of pixels, wherein the algorithm overwrites the value of the center pixel (column 9, lines 62-63; column 10, lines 10-12; "conversion of the intensity" refers to converting, the target pixel into either a white pixel or a black pixel, i.e., overwriting, column 12, lines 6-8) if:

all three pixels along a first edge share a first value (Sawada shows this in either of at least two ways: 1) in Fig.24, case "b", where the pixels of the top edge share a white value; 2) in Fig.25, where the pixels of the top edge share a black value); and

all three pixels along an opposing edge share a second value that is opposite of the first value (Sawada shows this in either of at least two ways: 1) in Fig.24, case "b" where the pixels of the bottom edge share a black value; 2) in Fig.25, where the pixels of the bottom edge share a white value); and

the two exterior pixels residing between the first and second edge share a common value (Sawada shows this in either of at least two ways: 1) in Fig.24, case "b" where the exterior pixels are those that are adjacent to the center pixel, in the left and right columns; 2) in Fig.25, where the exterior pixels are those that are adjacent to the center pixel, in the left and right columns.). In Sawada's invention, the above characteristics of the image blocks result in certain counts of pixels in the various rows/columns of the scanning window, which via the Table 3, allow the invention to determine whether a pixel is on an edge/contour (see column 11, lines 4-8). Conversion (i.e., overwriting) of the target (center) pixel is performed based on this determination.

As to claim 3, Sawada discloses the edge smoothing filter of claim 1, wherein the black white image comprises character data (column 10, line 53).

Conclusion

4.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOSEF KASSA whose telephone number is (571) 272-7452. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Werner can be reached on (571) 272-7401. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300 for regular communication and (571) 273-8300 for after Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

11/27/2007.

YOSEF KASSA
PRIMARY EXAMINER